BCAN Patient WEBINAR SERIES

Women & Bladder Cancer

A Woman-to-Woman Talk with Dr. Armine Smith

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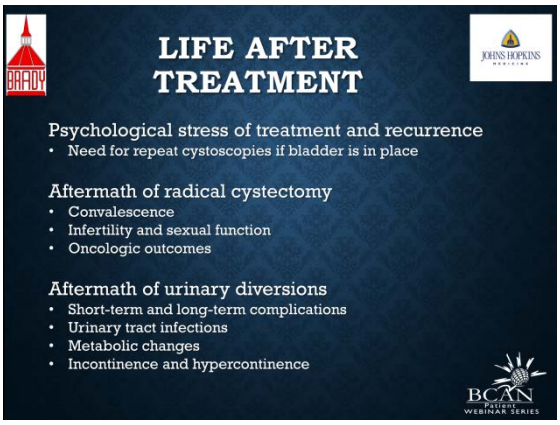
Part III: Survivorship

Presented by

Dr. Armine Smith *is an Assistant Professor of Urology at Johns Hopkins University and she's the Director of the Johns Hopkins Urologic Oncology at Sibley Hospital. She holds a position of Assistant Professor at George Washington University, and Clinical Associate at the National Cancer Institute. She earned her medical degree from the University of California in San Francisco and completed her Urologic Residency at the Cleveland Clinic and Urologic Oncology Fellowship at the NCI, the National Cancer Institute, where she focused on the development of targeted therapies for bladder cancer. Dr. Smith's area of expertise spans a wide range of urologic malignancies, with particular interest in bladder cancer. She specializes in complex urinary diversions, including continent orthotopic neobladder and continent catheterizable pouch techniques. Her research focus is on elucidating risk factors for the development of bladder cancer and overcoming resistance to conventional therapy regimens, including the development of personalized combinations targeted therapies.*

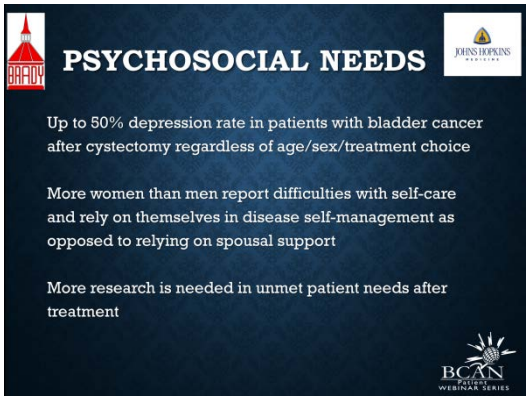
Speaking of the survivorship. Life after treatment involves a lot of adjusting and a lot of changes. We've come to more recognize more and more that there's the psychological stress of treatment and there's the psychological stress of the fear of the recurrence, because some of these tumors do recur frequently. They require repeat cystoscopies and it just makes patients very uneasy and very anxious.

One of the things that's unique to this type of cancer is the repeat cystoscopies if the bladder's in place, and sometimes it can be done as frequently as every three months for years and years. There are the aftermaths of the



radical cystectomy itself, which is a major surgery so it requires a period of convalescence. There is the risk of infertility and sexual function deterioration after the surgery and the oncological outcome. Then there are the unique aftermath of urinary diversions, which can be, in my mind broken down into the short-term and long-term complications. There is the risk of the urinary tract infections after these procedures, which is usually higher in the first few months after the diversion than it tapers down. There are metabolic changes because the bladder wall has a different permeability than the bowel wall that we use to make these diversions, so that changes the whole metabolical processing of the electrolytes and the toxic by-products of the urine. Then there are the issues of the urinary incontinence and sometimes the hypercontinence, and that's the whole another slide.

The psychosocial needs, like I said, they're being more and more recognized as we've learned more about this disease process. It's interesting, there's up to 50% reported depression rate in patients with bladder cancer after cystectomy and that's regardless of age, regardless of sex, and regardless of the urinary diversion and treatment choice. Interestingly, more women than men report difficulties with self-care and they rely on themselves in disease self-management as opposed to relying on their spouse. We are learning more, and there needs to be more research in this sphere of the bladder cancer.

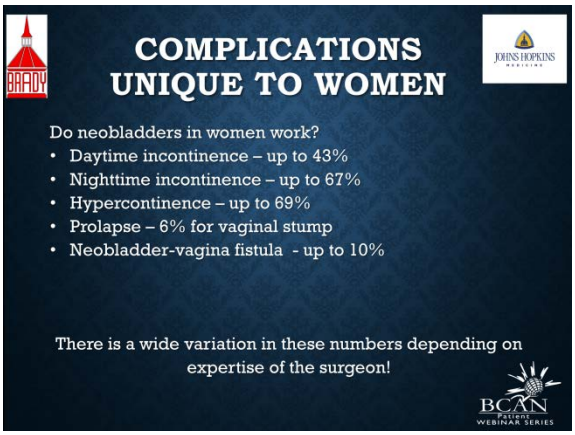


Cystectomy complications. There are short-term complications and the long-term ... The short-term most commonly, and I'm not going to dwell on this a whole lot, it just gives you an idea of the types of things that can go wrong obviously. There is the ileus, or which is the slowing of the bowel function for two days after surgery. There are the disturbances in the composition of the salts in the body, which is the electrolytes. There is the potential for leak of urine from all these new connections that we establish. There is a small potential of fear of the bowel leak or leak of the bowel contents from these new connections that we establish. There is a small risk of bowel obstruction, formation of the fistula, which is the abnormal connection between two organs that usually don't communicate. After the lymph node removal there is something called lymphatic leak and ascites, that are also potential of any surgery that deals with the lymph node removal. Then there's the stoma, we always have to worry about the viability of the stoma and the good blood supply to it.

The long-term complications, they do depend on the choice of the diversion. There is the risk of stenosis of the stoma, which is the scaring and narrowing down. There is the opposite, there is the looseness of the tissue around the stoma that can result in a peristomal hernia. There is the urinary tract infections with the flux of the urine into the kidneys, and the kidney infection, which is called pyelonephritis. These

patients are also at the risk of stone formation. Stones can be formed in kidneys or the pouch themself. There is a small risk of ureteral obstruction. These risks are reported differently in different series. With the longer duration of these urinary diversions maybe because of the infections, maybe because of the flux of the urine into the kidneys, we can see some change in the renal function. Worsening of the renal function. Then as a result of these electrolyte imbalances, some people may develop something that's called acidosis that needs will to be managed.

There are also complications that are unique to women and most of the time when we talk about this we think about neobladders. The difference in the neobladders in women and men, really there is the length of the urethra that I think makes all the difference in the world. Women can have daytime incontinence, more nighttime incontinence, so I'm giving you the worst numbers. Daytime incontinence can be reported in up to almost a half of the patients undergo this surgery. Nighttime incontinence is a little harder to eradicate, 67%. There's something that's called hypercontinence, that requires the catheterization, that's when the neobladder does not empty completely. This can reported in 69% of patients who undergo this type of surgery.



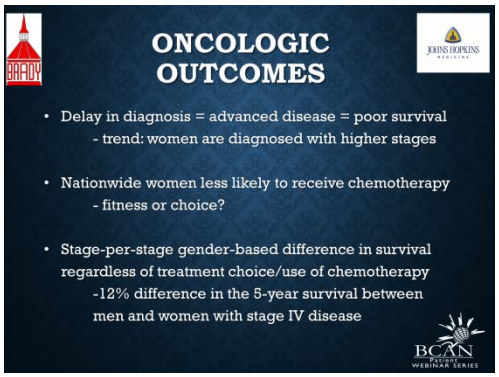
There is a prolapse, and the number there will be able to find in the literature is 6% for vaginal stump. Then there's the fear of neobladder-vagina fistula, which can be observed in up to 10% of the patients undergo this type of surgery. I gave you, like I said, I gave the highest numbers for each complication, however, there's a wide variation in these numbers depending on the expertise of the surgeon. That makes a huge difference in the decision-making of the patient, or should make a huge difference.

How do we optimize the outcomes for, let's say, the neobladder construction? Number one thing that's be proven time and again to make a difference is going to high-volume surgical centers. As we learn more about the anatomy of the female pelvis, we've realized the sparing with the nerves to the urethra. These nerves run on the side of the vagina, so taking a wider margin of the vagina or damaging the nerves during the surgery can result in worse continence, both the incontinence and the hypercontinence numbers.

If it's oncologically safe it may be feasible to spare the vagina and the uterus. That provides a better pelvic support, and may effect the numbers of urinary incontinence and hypercontinence. Then avoiding injury to the external sphincter, so looking at the urethra, and I put an illustration here. This is the bladder in men. The bladder with the prostate, and then the external urethral sphincter. There's a

higher length here and then it comes to the this here genital diagram. Right here. In the female, we have the short bladder neck and the short urethra, and the urethral sphincter, so one needs to be very mindful of this sphincter because it provides a lot of the urinary continence.

Oncologic outcomes, as we speak about the survivorship from the disease, I mentioned the delay in diagnosis results in advanced diseases presentation and advanced diseases presentation results in poor survival. There is a worldwide trend, women are diagnosed with higher stages and hence, there is a tendency for poor survival. Nationwide, women are less likely to receive chemotherapy. Nobody knows why, whether it's a fitness or it's a choice, but it's just something that's out there. Then stage-per-stage gender-based differences in survival are striking, regardless of the treatment choice or use of chemotherapy. Those numbers are less striking for people who undergo cystectomy, but more striking for, let's say, in a stage four disease, especially with the disease that invades into prostate in men versus the, let's say cervix or the uterus in women. It's at least a 12% difference in the five year survival, which I feel is a very major number.



This was a very brief rundown, to touch upon the important points on bladder cancer and the gender-based differences. The conclusions I wanted you to all take from here is there's more research needed on gender-based bladder cancer differences to improve the outcome of this disease. Both providers and the patients need to be educated on timely and proper work up of bladder symptoms for women, to provide timely diagnosis. There are differences in techniques of cystectomies. There's differences in complications between sexes, and one needs to be very mindful of that. Women can have a neobladder, if performed meticulously. Obviously more research is needed on unmet psychological needs of bladder cancer survivors.